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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,288	08/16/2001	Thomas Griffith	108214	9367
25944	7590	04/06/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,288

Applicant(s)

GRIFFITH ET AL.

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 42 and 44** are objected to because of the following informalities: claim 42, line 1 is missing the word “claim” in front of the number 42 and the preamble of claim 44 is not clear (e.g., try “The apparatus of claim 37 further comprising Segmenting the end-to-end ...”).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-6, 8-9, 11, 13, 16-21, 23-25, 27, 29-32, and 37-39** are rejected under 35

U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,418,128 B1 to *Takagi et al.* (“*Takagi*”).

As to **claim 1**, see figure 4 where a gateway device (referenced as 50x in figure 1) clearly translates between a wireless TCP protocol and a wireline TCP protocol using the TCP relay unit 310. As such, “receiving a first segment from a wired network” is taught when receiving a TCP segment on TCP unit 301 and “transmitting one or more segments over a wireless link wherein the one or more segments contain data from the first segment” is taught as part of the Radio RCP Unit 320. With respect to the further limitation “wherein the size of at least one of the second segments is based on the status

of the condition” see e.g., column 6, lines 25-47 where the size of a segment is adjusted based on the BER or signal strength.

As to **claim 2**, the BER or signal strength is associated with the radio network sent to the gateway device via a modified SNMP message from the radio network.

As to **claims 3-4**, TCP is known in the art as either continuous or bursty since the control protocol is a transmission protocol.

As to **claim 5-6**, the BER or signal strength comes from the base station where the measurement is further associated with a wireless terminal, see e.g., column 4.

As to **claim 8**, see similar rejection to claim 1 with respect to the TCP conversion unit.

As to **claims 9, 11, and 13**, the reference teaches measuring both bit error rates and signal strength where the signal strength is associated with a signal level associated with the wireless link, see e.g., column 4. Finally, a BER is also a rate of change of an error parameter.

As to **claim 16**, see similar rejection to claim 1 where the apparatus is the gateway.

As to **claim 17**, see similar rejection to claim 2.

As to **claim 18**, see e.g., TCP unit 301 in figure 4.

As to **claim 19**, see e.g., TCP relay unit 310 in figure 4.

As to **claim 20**, see e.g., radio-wire converter 311 in figure 4.

As to **claim 21**, see e.g., wire-radio converter 312 in figure 4.

As to **claim 23**, see similar rejection to claim 8.

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As to **claim 24**, see similar rejection to claim 8.

As to **claim 25**, see similar rejection to claim 9.

As to **claim 27**, see similar rejection to claim 11.

As to **claim 29**, see similar rejection to claim 13.

As to **claim 30**, see similar rejection to claim 1.

As to **claim 31**, the receiving device is e.g., a base station 140x shown in figure 1 which is associated with a wireless network.

As to **claim 32**, see similar rejection to claim 1 where the status condition is e.g., BER or signal strength.

As to **claim 37**, see similar rejection to claim 31.

As to **claim 38**, see similar rejection to claim 31. In addition, see e.g., the radio TCP unit 320.

As to **claim 39**, see similar rejection to claim 32.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 10, 12, 26, 28, 33, 34, 36, 40, 41, 43 and 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,128 B1 to *Takagi et al.* (“*Takagi*”) in view of “

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Channel Based Optimum Bandwidth with Spread Spectrum Land Cellular Radio” to *Shapira et al.* (“*Shapira*”).

As to **claims 10 and 12**, *Takagi* discloses limitations in the base claim.

Takagi may be silent or deficient to the further limitation of measuring a frame error rate (i.e., number of erroneous frames) or based on at least one of a noise level associated with the wireless link and an interference level associated with a wireless link).

Shapira teaches the further recited limitation(s) above at page 6.7.1.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Takagi* by clarifying that it is well known in the art prior to applicant’s invention to use a frame error rate since BER and FER are similar, and signal strength that uses a bit energy to noise ratio (i.e., a noise level and an interference level).

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant’s invention to include the above limitation(s). In particular, the motivation for modifying the reference or to combine the reference teachings would be to obtain quality of service. In particular, *Shapira* cures the above-cited deficiency by providing a motivation found at e.g., top of page 6.7.1. Second, there would be a reasonable expectation of success since error rates include either BER or FER as taught by *Shapira*. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 26**, see similar rejection to claim 10.

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As to **claim 28**, see similar rejection to claim 12.

As to **claim 33**, see similar rejections to claims 10 and 12 which are dependent on a mobile channel, see e.g., top left-column on page 6.7.1.

As to **claim 34**, see similar rejection to claim 1.

As to **claim 36**, see similar rejection to claim 8.

As to **claim 40**, see similar rejection to claim 33.

As to **claim 41**, see similar rejection to claim 1.

As to **claim 43**, see similar rejection to claim 8.

As to **claim 44**, the segmenting is performed by the gateway device 500 which operates on both sides of the link in an isolated fashion.

6. **Claims 14-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,128 B1 to *Takagi et al.* ("*Takagi*") in view of "Satellite/Cellular Interoperability" to *Cullen et al.* ("*Cullen*").

As such to **claims 14-15**, *Takagi* discloses limitations in the base claim.

Takagi may be silent or deficient to the further limitation of wherein the wireless system is a cellular link or a satellite based-link. In particular, *Takagi* discloses that the link is a radio link where cellular links and satellite based-links are both "radio links".

Cullen teaches the further recited limitation(s) above at e.g., page 8/1.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Takagi* by clarifying that radio links are either cellular links or satellite based-links.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation(s). In particular, the motivation for modifying the reference or to combine the reference teachings would be to cover a certain type of area. In particular, *Cullen* cures the above-cited deficiency by providing a motivation found at e.g., page 8 where space systems cover areas not yet or cannot be economically covered by terrestrial means. Second, there would be a reasonable expectation of success since cellular and satellite systems are radio based. Thus the references either in singular or in combination teach the above claim limitation(s).

7. **Claims 7, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,128 B1 to *Takagi et al.* ("*Takagi*") in view of U.S. Patent No. 5,995,725A to *Dillon et al.* ("*Dillon*").

As such to **claims 7 and 22**, *Takagi* discloses limitations in the base claim.

Takagi is silent or deficient to the further limitation of sending an acknowledgment for the first segment over the wired network before the data contained in the first segment is received by the wireless receiver. In particular, *Takagi* discloses TCP but does not mention acknowledgments.

Dillon teaches the further recited limitation above in figure 12 and column 11.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Takagi* by clarifying that acknowledgments are sent from a gateway device (e.g., gateway 50x as taught by *Takagi*)

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where the acknowledgments are sent before the first segment is received by the wireless receiver.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would to shorten the delay and improve the throughput over the link. In particular, *Cullen* cures the above-cited deficiency by providing a motivation found at e.g., middle of column 11. Second, there would be a reasonable expectation of success since both references teach TCP. Thus the references either in singular or in combination teach the above claim limitation(s).

8. **Claims 35 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,128 B1 to *Takagi et al.* ("*Takagi*") in view of "Channel Based Optimum Bandwidth with Spread Spectrum Land Cellular Radio" to *Shapira et al.* ("*Shapira*") and U.S. Patent No. 5,995,725 to *Dillon et al.* ("*Dillon*").

As such to **claims 35 and 42**, see similar rejections to claims 7 and 22 respectfully.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


DWF


Derrick W. Ferris
3/23/05